

Turn Left at Orion July-September Objects														
Name	Constellation	Object Type	Magnitudes	Object Size/ Double Star Separation	Rating			For Best View:		Coordinates		notes	page	additional description
					Dob	small	binocs	sky	magnification	Right Ascension	Declination			
M13	Hercules	Globular Cluster	5.8	20"	4	4	3	any	medium	16 H 41.7 min.	36° 27'	best globular in the northern sky	120	beautiful globular cluster with intermediate concentration - awesome Dob object
Sigma Coronae Borealis	Corona Borealis	Multiple Star	5.6, 6.5	7.1"	2	2	x	steady	high	16 H 14.7 min.	33° 51"	double star near M13	121	lovely double
Delta Herculis	Hercules	Double Star	3.1, 8.3	11"	1	x	x	steady	highest	17 H 15 min.	24° 50"	unequal double star in Hercules	121	challenging Dob double with a large brightness contrast
NGC 6207	Hercules	Galaxy	11.4	3' by 1.2', NNE-SSW	2	x	x	dark	medium	16 H 43.1 min.	36° 50'	dim galaxy very near M13	121	spiral galaxy; a Dob challenge close to M13
M92	Hercules	Globular Cluster	6.5	14"	3	3	1	dark	medium	17 H 17.1 min.	43° 9'	bright globular cluster	122	globular cluster; intermediate rich concentration
Rho Herculis	Hercules	Double Star	4.5, 5.4	4.0"	2	1	x	steady	highest	17 H 23.7 min.	37° 9"	double star in Hercules' 'keystone'	123	pleasant Dob double
Alpha Herculis, Ras Algethi	Hercules	Double (& variable) Star	3.5, 5.4	4.9"	3	2	x	steady	high	17 H 14.6 min.	14° 23"	colorful double star	124	nice red-green pair
M5	Serpens	Globular Cluster	8.3	20"	3	3	1	dark	low	15 H 18.5 min.	2° 5'	bright globular cluster	124	impressive globular cluster; intermediate concentration
M12	Ophiucus	Globular Cluster	8.4	16"	3	2	1	dark	medium	16 H 47.2 min.	-1° 57'	globular cluster; looks a tad smaller, brighter and less easily resolved than its partner, M12	126	globular cluster; looks a tad smaller, brighter and less easily resolved than its partner, M12
M10	Ophiucus	Globular Cluster	8.4	20"	3	2	1	dark	medium	16 H 57.1 min.	-4° 7'	globular cluster; near M12	126	globular cluster; looks a tad larger, dimmer and more easily resolved than its partner, M10
Epsilon Lyrae, Double-Double	Lyra	Quadruple Star	5.2, 6.1, 5.3, 5.4	208", 2.3", 2.3"	4	3	2	steady	high	18 H 44.4 min.	39° 38"	the great 'double-double'	128	maybe the niftiest multiple star in the sky - two widely-spaced close white pairs
Zeta Lyrae	Lyra	Double Star	4.3, 5.6	44"	1	1	1	steady	low	18 H 44.8 min.	37° 36"	wide double star	128	very wide double - easy but not terribly interesting
Struve 2470, D-D's double	Lyra	Double Star	7.0, 8.4	14"	2	2	x	steady	medium	19 H 8.8 min.	34° 46"	half of the 'double-double's double'	128	nice white pair, in the same field with the similar Struve 2474
Struve 2474, D-D's double	Lyra	Double Star	6.8, 7.9	34"	2	2	x	steady	medium	19 H 8.8 min.	34° 46"	half of the 'double-double's double'	128	nice yellow pair, in the same field with the similar Struve 2470
Struve 2725	Delphinus	Double Star	7.5, 8.2	6.0"	2	2	x	steady	high	20 H 46.2 min.	15° 54"	double star, near Gamma Delphini	128	dim white pair near Gamma Delphini
Gamma Delphini	Delphinus	Double Star	4.4, 5.0	9.1"	3	3	x	steady	high	20 H 46.7 min.	16° 8"	double star, near Struve 2725	128	very prett orange-lime colored pair, with the much dimmer pair Struve 2725 nearby
61 Cygni	Cygnus	Double Star	5.2, 6.1	31"	2	2	x	any	medium	21 H 6.6 min.	38° 42"	pretty, nearby double star	128	easy, wide orange pair; only 11.4 light years away
M57	Lyra	Planetary Nebula	8.8	1' by 1.7', NE-SE	4	3	x	dark	high	18 H 53.6 min.	33° 2"	Ring Nebula	130	the great Ring Nebula - a pretty little smoke ring even in small telescopes
Beta Lyrae	Lyra	Variable (& double) Star	3.3-4.3, 6.7	46"	1	1	1	steady	low	18 H 50.1 min.	33° 22"	eclipsing variable (and wide double)	131	famous eclipsing variable star near M57
Otto Struve 525	Lyra	Triple Star	6.1, 9.1, 7.6	1.8", 45"	3	2	x	steady	high	18 H 54.9 min.	41° 36"	pretty double near M57	131	dim but pretty yellow-blue pair near M57; high X in a Db shows a dim third companion
Beta Cygni, Albireo	Cygnus	Double Star	3.2, 4.7	37"	4	4	x	any	medium	19 H 30.7 min.	27° 58"	colorful double star	132	maybe the finest colorful double star in the sky; a bright orange-blue pair
Epsilon Sagittae	Sagitta	Double Star	5.8, 8.4	87"	1	1	x	any	low	19 H 37.3 min.	16° 28"	wide double near M71	139	dim, with a very distant faint companion
HN 84	Sagitta	Double Star	6.4, 9.5	28"	1	1	x	any	low	19 H 39.4 min.	16° 34"	wide double near M71	139	dim, with a distant, very faint companion
M56	Lyra	Globular Cluster	8.4	8"	2	1	x	dark	medium	19 H 16.6 min.	30° 10'	globular between Albireo & M57	132	globular cluster; small and hazy, grainy in a Dob
M29	Cygnus	Open Cluster	6.6	10"	2	2	1	any	low	20 H 23.9 min.	38° 31'	open cluster in Cygnus Milky Way	133	open cluster; poor with large brightness range and strong central concentration
M39	Cygnus	Open Cluster	4.6	30"	1	2	2	any	low	21 H 32.2 min.	48° 26'	open cluster in Cygnus Milky Way	133	open cluster; poor with medium brightness range and strong central concentration
16 Cygni	Cygnus	Double Star, Exoplanets	6.0, 6.2	40"	1	2	x	any	low	19 H 41.8 min.	50° 31"	double near the blinking planetary	134	wide, equal pair of yellow stars
NGC 6826, Blinking Nebula	Cygnus	Planetary Nebula	8.8	0.6"	3	2	x	dark	high	19 H 44.8 min.	50° 31"	remarkable little planetary nebula	134	with direct vision, wonderful little planetary nebula fades, and central star appears
R Cygni	Cygnus	Variable Star	6.1-14.4; 426 days		1	1	x	any	low	19 H 36.8 min.	50° 12'	red variable star	135	red variable - ranging in brightness from easy to see in a finder to invisible in an 8" Dob
M27	Vulpecula	Planetary Nebula	7.4	6"	4	4	1	dark	medium	19 H 59.6 min.	22° 43"	the great Dumbbell Nebula	136	possibly the most beautiful planetary nebula in the sky - a ghostly bowtie/dumbbell
M71	Sagitta	Globular Cluster	8.4	7"	3	3	1	dark	medium	19 H 53.7 min.	18° 47'	globular cluster in Sagitta	138	a globular cluster; not particularly bright, but grainy-looking
Zeta Sagittae	Sagitta	Double Star	5.0, 9.0	8.1"	2	1	x	any	low	19 H 49 min.	19° 8"	double star near M71	139	unequal double
Theta Sagittae	Sagitta	Double Star	6.6, 8.9	12"	1	1	x	any	low	20 H 9.9 min.	20° 55"	double star in Sagitta	139	rather dim star with a dim companion in a crowded field
Brooch's, Coathanger	Vulpecula	Open Cluster		80"	x	x	3	any	lowest	19 H 25.4 min.	20° 11'	binocular 'Coathanger' asterism	139	much too large for a telescope, but a pretty asterism in binoculars or finderscope
M11	Scutum	Open Cluster	8.4	11"	4	3	1	dark	medium	18 H 51.1 min.	-6° 16'	'Wid Ducks' open cluster in Scutum	140	open cluster; rich with medium brightness range and strong central concentration - wow!
Struve 2391	Scutum	Double Star	6.5, 9.6	38"	1	1	x	any	low	18 H 48.7 min.	-6° 2"	wide double near M11	141	unequal, wide double close to M11
15 Aquilae	Aquila	Double Star	5.5, 7.0	39"	2	2	x	any	low	19 H 5 min.	-4° 2"	wide double near M11	141	wide yellow-blue pair
M26	Scutum	Open Cluster	8	10"	2	1	1	dark	low	18 H 45.3 min.	-9° 23'	open cluster near M11	141	open cluster; moderately rich with small brightness range and strong central concentration
R Scuti	Scutum	Variable Star	4.2-8.6; 146 days		1	1	1	any	low	18 H 47.5 min.	-5° 43'	variable star near M11	141	variable star close to M11
V Aquilae	Aquila	Carbon Star	6.8		2	2	2	any	low	19 H 4.4 min.	-5° 41'	deep red 'carbon' variable star	141	lovely deep red variabe star
M16	Serpens	Open Cluster	6	8"	2	1	1	dark	low	18 H 18.8 min.	-13° 47"	open cluster near M17	142	open cluster
M18	Sagittarius	Open Cluster	6.9	7"	1	1	x	dark	low	18 H 19.9 min.	-17° 8'	open cluster near M17	142	open cluster
M17	Sagittarius	Diffuse Nebula	6	15' by 20'	4	3	2	dark	low	18 H 20.8 min.	-16° 11'	the Swan Nebula	142	beautiful nebula; the brightest parts look like a swan or a check mark, in a rich starfield
M23	Sagittarius	Open Cluster	5.5	25"	2	3	4	dark	low	17 H 56.9 min.	-19° 1'	open cluster near M25 in Sagittarius	144	open cluster; a Dob resolves grainy haze into 50 stars
M25	Sagittarius	Open Cluster	4.6	25"	2	3	4	dark	low	18 H 31.7 min.	-19° 15'	open cluster near M23 in Sagittarius	144	open cluster; a wide sprinkling of stars, including Cepheid variable U Sagitarii
M24	Sagittarius	Open Cluster	4.6	90"	1	2	3	dark	low	18 H 18.4 min.	-18° 26'	open cluster near M23 & M25	145	huge star cloud, visible to naked eye but too large to see well in a telescope
U Sagittarii	Sagittarius	Cepheid Variable Star	8.28-7.16; 6 days and 18 hour		1	1	1	any	low	18 H 31.8 min.	-19° 22'	Cepheid variable star	145	Cepheid variable in M25; at maximum, clearly the brightest in the cluster - at minimum, not
NGC 6530	Sagittarius	Open Cluster	4.6	15"	2	2	1	any	medium	18 H 4.7 min.	-24° 20'	open cluster enmeshed in M8	146	pretty open cluster, enveloped by M8
M8	Sagittarius	Diffuse Nebula	7.7	30' by 45'	4	3	3	dark	medium	18 H 4.7 min.	-24° 23'	Lagoon Nebula, engulfing NGC 6530	146	awesome and intricate emission nebula, enveloping open cluster NGC 6530
M21	Sagittarius	Open Cluster	5.9	16"	2	1	x	any	medium	18 H 4.8 min.	-22° 30'	open cluster near M20	148	open cluster; moderately rich with large brightness range and strong central concentration
M20	Sagittarius	Diffuse Nebula	6.3	20"	3	2	2	dark	medium	18 H 1.9 min.	-23° 2'	the Trifid Nebula	148	Trifid Nebula; the 'trifid' (in 3 parts) reason for the name is clear only with larger apertures
HN40	Sagittarius	Triple Star	7.6, 10.4, 8.7	6.1", 11"	2	1	x	steady	high	18 H 2.3 min.	-23° 2"	multiple star inside M20	149	brightest star in M20; multiple: 2, 3, or 4 members depending on 'scope and conditions)
Xi Lupi	Lupus	Double Star	5.1, 5.6	10"	3	3	x	steady	high	15 H 56.9 min.	-33° 58"	double star in Lupus	150	blue-blue pair
Eta Lupi	Lupus	Triple Star	3.4, 7.5, 9.4	14", 116"	1	1	x	steady	high	16 H 0.1 min.	-38° 24"	double star in Lupus	150	unequal triple star; a much dimmer companion and a distant vastly dimmer companion
Xi Scorpii	Scorpius	Triple Star	5.2, 4.9, 7.3	0.9", 7.9"	3	1	x	steady	high	16 H 4.4 min.	-11° 22"	multiple star, next to Struve 1999	150	nice yellow-orange pair; the brighter is a close, tough Dob challenge; near Struve 1999
Struve 1999	Scorpius	Double Star	7.5, 8.1	12"	1	1	x	steady	high	16 H 4.5 min.	-11° 26"	double star, next to Xi Scorpii	150	dim yellow pair in same field as Xi Scorpii
Beta Scorpii, Graffias	Scorpius	Double Star	2.6, 4.5	12"	2	2	x	steady	high	16 H 5.4 min.	-19° 51"	bright, pretty double star in Scorpius	150	bright yellow-blue pair
Nu Scorpii	Scorpius	Double Star	4.4, 5.3, 6.6, 7.2	1.3", 41", 42"	2	1	x	steady	high	16 H 12 min.	-19° 28"	challenging double-double	150	nice, very wide pair of challenging dob doubles - one challenging, the other very challenging
Alpha Scorpii, Antares	Scorpius	Double Star	1.0, 5.4	2.6"	1	x	x	steady	high	16 H 29.4 min.	-26° 26"	challenging Dob challenge double	150	much dimmer companion; if visible in a big Dob it looks greenish against red Antares
24 Ophiuchi	Ophiucus	Double Star	6.3, 6.3	1.0"	1	x	x	steady	high	16 H 56.8 min.	-23° 9'	difficult Dob double star	150	extremely close, challenging equal blue pair
36 Ophiuchi	Ophiucus	Double Star	5.1, 5.1	4.9"	2	1	x	steady	high	17 H 15.4 min.	-26° 35"	double star in Ophiuchus	150	equal orange pair with somewhat dimmer companion far away
Omicron Ophiuchi	Ophiucus	Double Star	5.2, 6.6	10"	3	3	x	steady	high	17 H 18 min.	-24° 17"	pretty double star in Ophiuchus	150	orange-blue pair
M80	Scorpius	Globular Cluster	7.3	10"	2	1	x	dark	medium	16 H 17.1 min.	-22° 59'	globular near M4	152	globular cluster with dense central concentration; makes stark contrast with nearby M4
M4	Scorpius	Globular Cluster	4.6	35"	3	2	1	dark	medium	16 H 23.7 min.	-26° 31'	globular cluster near Antares	152	big, pretty globular cluster near Antares; easy to resolve into stars
M62	Oph.-Sco.	Globular Cluster	6.4	15"	3	2	1	dark	medium	16 H 54.3 min.	-30° 8'	globular in Ophiuchus, near M19	154	globular cluster; intermediate rich concentration; not far from M19
M19	Ophiucus	Globular Cluster	6.8	17"	3	2	1	dark	medium	17 H 2.6 min.	-26° 15'	globular in Ophiuchus, near M62	154	globular cluster, not far from M62
RR Scorpii	Scorpius	Variable Star	5.0-12.4; 281 days		1	1	x	dark	medium	16 H 56.6 min.	-30° 35'	variable star near M62	155	red Mira-type variable, ranging from just short of naked-eye to too dim for a small 'scope
M6	Scorpius	Open Cluster	9.7	30"	2	3	3	dark	low	17 H 40.1 min.	-32° 13'	large, bright Scorpius open cluster	156	open cluster; poor with medium brightness range and strong central concentration
M7	Scorpius	Open Cluster	8.3	75"	2	3	4	dark	low	17 H 54 min.	-34° 49'	large, bright Scorpius open cluster	156	open cluster; rich with medium brightness range and strong central concentration
BM Scorpii	Scorpius	Variable Star	5.25-6.46		1	1	x	any	low	17 H 41.0 min.	-32° 13'	variable star in M6	157	bright orange variable star near eastern (trailing) edge of M6
HD 160202	Scorpius	Flare Star	6.7, except during rare flares		1	1	1	any	low	17 H 40.0 min.	-31° 12'	flare star	158	normally just one of the brighter stars in M6 - but be alert for a flare!
M28	Sagittarius	Globular Cluster		13"	2	2	1	dark	medium	18 H 24.6 min.	-24° 52'	globular cluster, near M22	158	globular cluster; intermediate rich concentration

M22	Sagittarius	Globular Cluster	5.2	30'	4	3	2	dark	medium	18 H 36.4 min.	-23° 56'	one of the best globulars in the sky	158	a truly wonderful and easily resolved globular cluster - among the top 4 in the sky
M54	Sagittarius	Globular Cluster	7.7	12'	2	1	x	dark	medium	18 H 55.2 min.	-30° 28'	globular cluster in Sagittarius	160	globular cluster; strong inner core of stars
M55	Sagittarius	Globular Cluster	6.3	19'	2	1	x	dark	medium	19 H 40.1 min.	-30° 56'	globular cluster in Sagittarius	160	globular cluster
Zeta Sagittarii, Ascella	Sagittarius	Double Star	3.3, 3.5	0.5"	1	x	x	steady	highest	19 H 2.6 min.	-29° 53"	extreme Dob challenge	160	even pair; too close to split, except (maybe) 2014-2018 in a big Dob under perfect conditions